# Jeff Chen

## Education

2012-2016

[**Carnegie Mellon University Class of 2016**](http://cmu.edu) - B.S. Computer Science

* Expected minors in Human-Computer Interaction and Robotics
* Relevant coursework - Introduction to Computer Systems, Parallel and Sequential Data Structures and Algorithms, Great Theoretical Ideas in Computer Science, Science of the Web, Human-Robot Interaction, Cognitive Robotics, Humanoids

## Experience

2013-2014

**Stokes Scholar**, [*National Security Agency*](https://nsa.gov/)

* Held TS//SI clearance since 2012
* Summer 2013
  + Wrote tool to detect and neutralize Windows malware using infection markers
    - Enabled lightweight, fast, and accurate detection of known malware
    - Neutralized malware by taking control of known infection markers
    - Applied heuristic analysis to potential infection markers with success rate comparable to commercial antivirus software
  + Created tool that displays a two-dimensional overview of network activity for intuitive analysis
* Summer 2014
  + Did some stuff relating to this other stuff
    - It was done in this language
    - It was pretty fucking awesome
    - Here's another bullet point

2010-2012

**Software Lead**, [*AUVSI RoboSub*](http://avbotz.com/)

* Wrote and maintained software for an autonomous submarine
  + Implemented computer vision algorithms, including image segmentation, blob detection, and line detection
  + Wrote PID controller and Kalman filter for accurate motion through turbulent water
* Taught novice programmers object-oriented programming and C++

## Projects

July 2014

Wrote [**Ties**](https://github.com/iambald/myCircle), an Android application that helps people stay in touch.

April 2014

Implemented [**computer stereo vision**](https://github.com/iambald/depth) in OpenCV as a final project.

April 2014

Made an accurate [**color segmenter**](https://github.com/cyang1/segmentation) by bounding a floodfill with the results of an edge detector as a final project.

Februrary 2014

Created [**MiniPlay**](https://github.com/iambald/MiniPlay), a Chrome extension to operate Google Play Music and add features like global shortcuts and Last.fm scrobbling. Has over 300 daily users.

August 2013

Built a [**threadpool**](https://github.com/iambald/threadpool) in modern C++11 to fill the gap in the C++ standard library between std::async and std::thread.

April 2013

Wrote [**Skein**](https://github.com/iambald/Skein), a high-performance brute forcer to crack aa Skein-1024 hash. In the [xkcd Alma Mater challenge](http://xkcd.com/1193) (listed as laspositascollege.edu), out-performed the efforts of entire universities, including Cornell and LSU.

December 2012

Wrote a virtual machine designed to interpret and execute C0 bytecode as a final project.

September 2012

At the Fall 2012 PennApps hackathon, developed [**Chroma**](https://github.com/iambald/Chroma), an Android application designed to help colorblind people distinguish between the entire color spectrum.

## Skills

Languages

C++, C, Java, Javascript, Python, SML, x86 assembly

Web

CSS, HTML, Node.js

Other

Bash, Git, Markdown, LaTeX, CMD, GDB

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